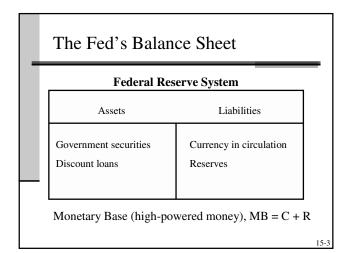
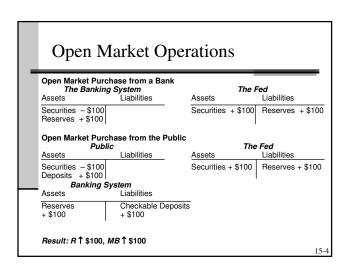
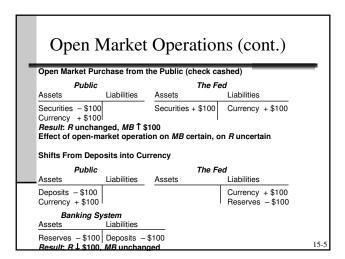


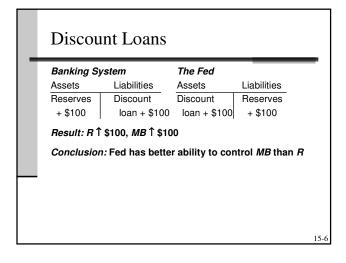
The Money Supply Process Players central bank: the Fed banks depositors borrowers from banks Functions of the Federal Reserve System conducts monetary policy clears checks regulates banks

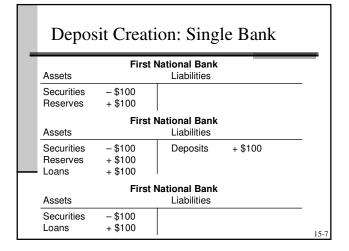
15-2











| _ | Deposit Creation: Banking System | | | | | | | |
|---|----------------------------------|---------|-------------|---------|------|--|--|--|
| | | | Bank A | | | | | |
| | Assets | | Liabilities | | | | | |
| | Reserves | + \$100 | Deposits | + \$100 | | | | |
| | Bank A | | | | | | | |
| | Assets | | Liabilities | | | | | |
| | Reserves | + \$10 | Deposits | + \$100 | | | | |
| | Loans | + \$90 | I | | | | | |
| | Bank B | | | | | | | |
| | Assets | | Liabilities | | | | | |
| 1 | Reserves | + \$90 | Deposits | + \$90 | | | | |
| 1 | Bank B | | | | | | | |
| | Assets | | Liabilities | | | | | |
| 1 | Reserves | + \$ 9 | Deposits | + \$90 | | | | |
| | Loans | + \$81 | 1 | | 15-8 | | | |

Deposit Creation – Example

| Bank | Increase in Deposits (\$) | Increase in Loans (\$) | Increase in Reserves (\$) |
|---------------------|------------------------------|---------------------------|------------------------------|
| First National | 0.00 | 100.00 | 0.00 |
| A | 100.00 | 90.00 | 10.00 |
| В | 90.00 | 81.00 | 9.00 |
| C | 81.00 | 72.90 | 8.10 |
| D | 72.90 | 65.61 | 7.29 |
| E | 65.61 | 59.05 | 6.56 |
| F | 59.05 | 53.14 | 5.91 |
| | | | |
| | | | : |
| Total for all banks | 1,000.00 | 1,000.00 | 100.00 |

Deposit Creation

If Bank A buys securities with the \$90 check

| | Dank A | | | | | |
|------------|--------|-------------|---------|--|--|--|
| Assets | | Liabilities | | | | |
| Reserves | + \$10 | Deposits | + \$100 | | | |
| Securities | + \$90 | | | | | |

The seller deposits \$90 at Bank B and the process is the same.

Whether the bank makes loans or buys securities, we get same deposit expansion

15 10

The Deposit Multiplier

required reserves are calculated as a certain fraction r (required reserve ratio) of checkable deposits:

$$RR = r \times D$$

■ hence, deposits can be calculated as:

$$D = \frac{1}{r} \times R$$

thus, the change in deposits depends on the change in reserves:

$$\Delta D = \frac{1}{r} \times \Delta R$$

Deposit Creation:

The Banking System as a Whole

| Banking System | | | | | | | |
|----------------|----------|-------------|----------|--|--|--|--|
| Assets | | Liabilities | | | | | |
| Securities | - \$100 | Deposits | + \$1000 | | | | |
| Reserves | + \$100 | | | | | | |
| Loans | + \$1000 | | | | | | |

Critique of Simple Model

Deposit creation stops if:

- proceeds from loan kept in cash
- bank holds excess reserves

15-12

5-11